



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

No. IV.

FLOORING CRAMP.

The LARGE SILVER MEDAL was presented to Mr. ANDREW SMITH, 69, Princes Street, Leicester Square, for his Improved Cramp for Flooring-boards; one of which has been placed in the Society's Repository.

69, Princes Street, Leicester Square,

SIR,

March 23, 1832.

IN the year 1828 I had the honour to be rewarded by the Society for an improved flooring-cramp: since that time I have manufactured and sold upwards of two thousand; which number, I trust, is a sufficient proof of the usefulness of the invention to the public. However useful the above may be considered, I have lately made a very important improvement with respect to its construction, the principle being quite different, and new as applied to this purpose: it is also much more durable and compact, and at least three times quicker in the operation of applying it. The principal advantages of the improvement consist of a horizontal application instead of a vertical one, on which account it cannot come in contact with the pugging or deafening which is generally within an inch and a half of the top of the joist.

The accompanying model, along with another of the old cramp, will sufficiently elucidate my improvement. I have the honour to be,

Sir,

Your obedient Servant,

A. AIKIN, Esq.

ANDREW SMITH.

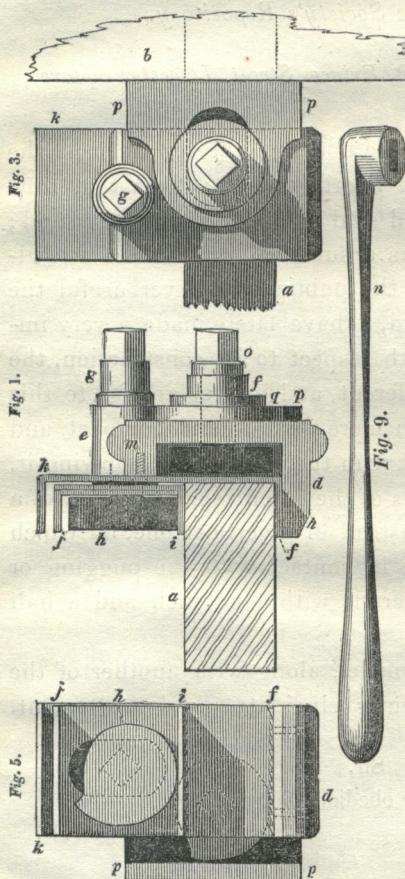
Secretary, &c. &c.

The chief improvement in the construction of this cramp for flooring-boards is the readiness with which it may be made to take tight hold of a joist; and when thus converted into a fixed fulcrum, the flooring-board may by means of it be at once pressed quite home previous to nailing it down.

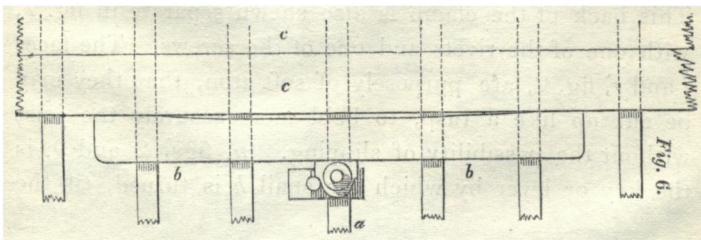
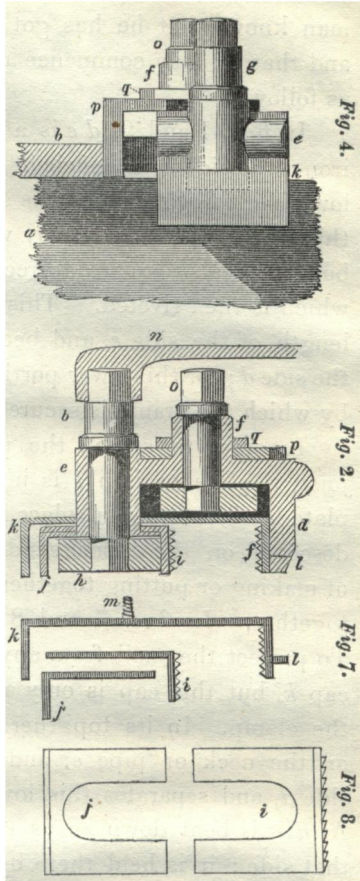
The joists of good floors being tolerably uniform in

thickness, the clamp that lays hold of them does not require much spare room for adjustment, therefore a strong iron snail serves readily instead of a screw; and as its axis may be vertical, there is nothing in the way to obstruct the lever that turns it. A similar snail serves to press the clamping-board *b*, fig. 6, close home against the board *c*, and tighten that board previous to nailing. The machine, therefore, has two snails, one for tightening it on a joist, and the other for pressing the boards close.

Fig. 1 is a back view of the cramp, hav-



ing tight hold of a joist *a*. Fig. 2 is a similar view in section. Fig. 3 is a top view of the machine, fixed tight on the joist *a*, and in the act of pressing or holding the clamping-board *b* tight against the preceding floor-board. Fig. 4 is a side view, in the same action; and fig. 5 is an under view, to shew the two snails. The smaller view, fig. 6, shews the cramp on a joist, not yet pressing, but ready to press home the loose floor-board *c* close to the preceding one, which has been nailed: for this purpose, a board *b* is interposed, to spread the pressure over several joists; and it is purposely made so hollow or curved, as to exceed any such errors as would ever be left in the floors; therefore when it is pressed by the cramp so as to become straight, the boards *c c* are sure to be close, and the work-



man knows that he has got the due degree of pressure, and that he may commence nailing. Its construction is as follows :

In figs. 1 and 2, $d e$ is a clamp-shaped piece of cast-iron : the side e is deficient in length, but it has a hollow pipe, through which the strong vertical axis g passes ; this has a square head, by which it may be turned ; the bottom is also square, to receive on it the snail h , fig. 5, which is then riveted. This snail makes up the deficient length of the side e , and becomes the opposing force to the side d ; for this lower portion only is to form the clamp, by which the cramp is securely attached to any joist a .

In order to spread the pressure of the snail on the joist, a plate of iron i is interposed ; and, to keep this plate loose, and yet in place, it passes over the snail, and descends on the opposite side j ; and for the convenience of making or putting together, it is in two pieces, riveted together. In figs. 7 and 8 they are shewn separated. To protect the snail from any violence, it is covered by a cap k , but this cap is only a prolongation of the back of the clamp. In its top there is a hole which fits tight on the neck or pipe e , and then it passes over to the side d , and separates this lower portion from the upper. At d it is bent down so as to form a face of soft iron to that side ; it is held there by two rivets, shewn in fig. 5, and at the side e by two screws : the dotted lines l , fig. 2, shew one of the rivets, and m , fig. 1, one of the screws. This back of the clamp is also shewn separate in fig. 7, with one of the rivets and one of the screws. The faces i and f , fig. 2, are purposely of soft iron, that they may be cut up like a rasp, to hold more securely the joist without the possibility of slipping. n , figs. 2 and 9, is the key or lever by which the snail h is turned, till the

joist *a* is tightly held, as in fig. 1, with the partition *k* lying flat and close on it. In the space above this partition is placed another snail, level with the floor-boards; it is turned by an axis *o*, which rises through the middle neck *f*; and on the top of the cramp is laid a sliding-plate *p*, seen best in figs. 3 and 4, it having a hole through which the neck *f* rises; this hole is elongated enough to let the plate slide. The front of this plate hangs down, as in fig. 4, to interpose itself between the upper snail and the board *b*: against this portion the snail acts, and spreads its pressure on the board *b*; therefore, as soon as the clamp has been fixed to the joist by the lever *n* on the axis *g*, that lever is removed to the axis *o*, and the floor-board pressed close home, ready for nailing. After the plate *p* has been put over the neck *f*, it is followed by a soft iron ring *q*, which is driven tight on to the neck *f*, so as to become a flanch, and keep the plate *p* in place.

The snails are of course made of such a rate as not to move of themselves so as to lose hold, yet they are very easily loosened by the lever, and less than one turn always serves to bind them tight.

No. V.

SASHES FOR GOTHIC WINDOWS.

The SILVER ISIS MEDAL was voted to Mr. J. HALL, Jun., of Plymouth, for his improved Sashes for Gothic Windows; a Model of which has been placed in the Society's Repository.

ORDINARY square windows are so incapable of any beauty in their design, that the circumstance of the lower